



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/633,013	08/01/2003	Peter Gaal	030303	4734
------------	------------	------------	--------	------

23696	7590	07/28/2005
-------	------	------------

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

LE, DANH C

ART UNIT	PAPER NUMBER
----------	--------------

2683

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,013

Applicant(s)

GAAL ET AL.

Examiner

DANH C. LE

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-24 and 33-38 is/are allowed.
- 6) ☒ Claim(s) 1-16 and 25-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 5/3/02 and 12/19/02 have been considered by the examiner and made of record in the application file.

Specification

2. The disclosure is objected to because of the following informalities:

There is no figure 7, in Brief description of drawing and figure 6 did not description correctly.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-16, 25-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fong (US 2004/0223455) in view of Enns (US 2003/0137988).**

As to claim 1, Fong teaches a method for scheduling grant channels to carry grant messages to a plurality of scheduled mobile stations in an area of a communications network (figure 1), the method comprising:

assigning to a current mobile station in an ordering of the plurality of scheduled mobile stations, a previously unassigned grant channel from a list of grant channels monitored by the current mobile station (paragraph 0033)

Fong fails to teach repeating the assignment for a next mobile station in the ordering of scheduled mobile stations, if there are more mobile stations to be processed in the ordering of the scheduled mobile stations. Enns teaches repeating the assignment for a next mobile station in the ordering of scheduled mobile stations, if there are more mobile stations to be processed in the ordering of the scheduled mobile stations (figure 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Enns into the system of Fong in order to control allocation of data access over communication channel in a data communication network.

As to claim 2, the combination of Fong and Enns teaches a method of claim 1, further comprising:

rearranging the ordering for the plurality of scheduled mobile stations after the mobile stations in the ordering have been assigned grant channels, and repeatedly assigning grant channels to mobile stations, until every grant channel has been assigned a mobile station in the ordering (figure 2).

As to claim 3, the combination of Fong and Enns teaches the method of claim 2, wherein rearranging the ordering includes rearranging the order of the list of grant channels monitored by the current mobile station (figure 9).

As to claim 4, the combination of Fong and Enns teaches the method of claim 2, wherein rearranging the ordering includes rotating the order of the plurality of scheduled mobile stations (paragraph 0045).

As to claim 5, the combination of Fong and Enns teaches the method of claim 1, wherein the previously unassigned grant channel includes a first available grant channel from the list of grant channels monitored by the current mobile station (figure 13).

As to claim 6, the combination of Fong and Enns teaches the method of claim 1, the combination of Fong and Enns fails to teach the plurality of scheduled mobile stations is a subset of a total number of mobile stations operating within the area. However, the examiner takes Official Notice that the plurality of scheduled mobile stations is a subset of a total number of mobile stations operating within the area is known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of above recited limitation into the system of Fong and Enns in order to control allocation of data access over communication channel in a data communication network.

As to claim 7, Fong teaches a method for scheduling grant channels to carry grant messages to a plurality of scheduled mobile stations in a sector of a communications network (figure 1), the method comprising:

assigning at least one grant channel to each scheduled mobile station in an ordering of the scheduled mobile stations for monitoring (paragraph 0033);

Fong fails to teach assigning to a current mobile station in the ordering, a grant channel that is monitored by the current mobile station and is not previously assigned to the current mobile station and changing the current mobile station to a next mobile station in the ordering of scheduled mobile stations, and repeating the assigning of a previously unassigned monitored grant channel, if there are more mobile stations to be processed in the ordering of scheduled mobile stations. Enns teaches assigning to a current mobile station in the ordering, a grant channel that is monitored by the current mobile station and is not previously assigned to the current mobile station and changing the current mobile station to a next mobile station in the ordering of scheduled mobile stations, and repeating the assigning of a previously unassigned monitored grant channel, if there are more mobile stations to be processed in the ordering of scheduled mobile stations (figure 13). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Enns into the system of Fong in order to control allocation of data access over communication channel in a data communication network.

As to claim 8, the combination of Fong and Enns teaches a method of claim 7, further comprising:

rearranging the ordering for the plurality of scheduled mobile stations after the mobile stations in the ordering have been assigned grant channels, and repeatedly

Art Unit: 2683

assigning grant channels to mobile stations, until every grant channel has been assigned a mobile station in the ordering (Enns, figure 13, step 190).

As to claim 9, the combination of Fong and Enns teaches method of claim 8, wherein assigning at least one grant channel includes assigning a first plurality of mobile stations to every grant channel, in order (Enns, step 30).

As to claim 10, the limitation of the claim is the same limitation of claim 6; therefore, the claim is interpreted and rejected as set forth as claim 6.

As to claim 11, the combination of Fong and Enns teaches method of claim 10, wherein assigning at least one grant channel further includes assigning remainder of mobile stations to a first same number of grant channels in order (Enns, figure 13).

As to claim 12, the combination of Fong and Enns teaches method of claim 8, wherein assigning at least one grant channel includes randomly selecting a set of grant channels from the at least one grant channel to assign to each mobile station to monitor (Enns, paragraph 0056).

As to claim 13, the combination of Fong and Enns teaches method of claim 8, wherein the previously unassigned grant channel includes a first available grant channel from the at least one grant channel monitored by the current mobile station (paragraph 0046).

As to claim 14, the combination of Fong and Enns teaches method of claim 13, wherein rearranging the order includes rearranging the order of the at least one grant channel monitored by the current mobile station (figure 13).

As to claim 15, the combination of Fong and Enns teaches method of claim 8, wherein rearranging the order includes rotating the order of the plurality of scheduled mobile stations (figure 13).

As to claim 16, the limitation of the claim is the same limitation of claim 6; therefore, the claim is interpreted and rejected as set forth as claim 6.

As to claim 25, Fong teaches a transceiver controller in a CDMA communications network (figure 1, 19), the transceiver controller comprising:

a grant channel assignment module configured to assign grant channels to carry grant messages to a current mobile station in an ordering of a plurality of scheduled mobile stations in an area of the CDMA communications network (paragraph 0033).

Fong fails to teach a previously unassigned grant channel from a list of grant channels monitored by the current mobile station, and to repeat the assignment for a next mobile station in the ordering of scheduled mobile stations, if there are more mobile stations to be processed in the ordering of the scheduled mobile stations. Enns teaches a previously unassigned grant channel from a list of grant channels monitored by the current mobile station, and to repeat the assignment for a next mobile station in the ordering of scheduled mobile stations, if there are more mobile stations to be processed in the ordering of the scheduled mobile stations (figure 13). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Enns into the system of Fong in order to control allocation of data access over communication channel in a data communication network.

As to claim 26, the combination of Fong and Enns teaches a transceiver controller of claim 25, wherein each message in the grant messages include messages specific to a mobile station (Fong, paragraph 0033, 0043).

As to claim 27, the combination of Fong and Enns teaches the transceiver controller of claim 25, wherein the grant messages include Reverse Enhanced Supplemental Channel (R-ESCH) grants (Fong, paragraph 0033, 0043).

As to claim 28, the combination of Fong and Enns teaches transceiver controller of claim 25, wherein the grant channel assignment module includes:

a rearrangement module configured to rearrange the order for the plurality of scheduled mobile stations, and to repeat the assignment process executed by the grant channel assignment module, if not every grant channel has been assigned a mobile station, if not every grant channel has been assigned a mobile station (Enns, figure 13).

As to claim 29, the combination of Fong and Enns teaches transceiver controller of claim 28, wherein the rearrangement module rearranges the order of the list of grant channels monitored by the current mobile station (Enns, figure 13).

As to claim 30, the combination of Fong and Enns teaches the transceiver controller of claim 29, wherein the rearrangement module rearranges the list order by rotating the order of the plurality of scheduled mobile stations (Enns, figure 13, 190).

As to claim 31, the combination of Fong and Enns teaches transceiver controller of claim 25, wherein the previously unassigned grant channel includes a first available grant channel from the list of grant channels monitored by the current mobile station (Enns, figure 13).

As to claim 32, the limitation of the claim is the same limitation of claim 6; therefore, the claim is interpreted and rejected as set forth as claim 6.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

Claims 17-24 and 33-38 are allowed.

As to claims 17 and 33, the teaching of above prior arts either alone or in combination fails to teach a base station in a CDMA communications network, the base station comprising a controller configured to schedule grant channels to carry grant messages to a plurality of scheduled mobile stations in an area of the CDMA communications network, the controller including a grant channel assignment module, a modulator configured to process and spread the grant messages and a transmitter unit configured to condition the processed grant messages, to generate a forward link signal, and to transmit the forward link signal on grant channels.

Dependent claims 18-24 and 34-38 are allowable for the same reason.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Yamagishi (US 2005/0013322) teaches data transfer apparatus and its control method.

B. Huttunen (US 6,810,026) teaches method reduce radio channel access delay in GPRS system and packet radio system.

C. Mistry et al (US 2004/0213264) teaches service class and destination dominance traffic management.

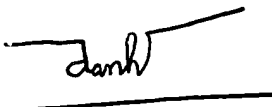
D. Molno et al (US 2001/0030949) teaches method and apparatus for associated signaling in a wireless communication networks.

E. Tiedemann, Jr et al (US 2002/0012332) teaches method and apparatus for forward link rate scheduling.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C. LE whose telephone number is 571-272-7868. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



July 21, 2005.

DANH CONG LE
PATENT EXAMINER